

MATH 478 (MAST 661/837), Sec. A
Non-Linear Programming
Fall 2021

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Office Hours: Thursdays, 14:00-15:30.

Course materials available online:

Textbook: *Convex Optimization* by Boyd and Vandenberghe
http://web.stanford.edu/~boyd/cvxbook/bv_cvxbook.pdf

Lecture Slides: http://www.stanford.edu/~boyd/cvxbook/bv_cvxslides.pdf

Errata: https://web.stanford.edu/~boyd/cvxbook/cvxbook_errata.html

Extras: Extra materials will be posted on Moodle.

Assignments: Given regularly with firm due dates. The assignments and solutions will be posted on Moodle. No late assignments will be accepted. *You should provide complete arguments in your homework—not just answers.* A subset of each assignment will be graded. Students will not be told in advance which subset of the assigned problems will be marked and should therefore attempt all assigned problems.

Grading: 10% Assignments, 30% in-class Midterm Test (7th or 8th week), 60% Final Exam **or** 10% Assignments, 90% Final Exam. The Final Exam will be take-home. *Graduate students will have extra problems on assignments and exams.*

If the grading scheme for this course includes graded assignments, a reasonable and representative subset of each assignment may be graded. Students will not be told in advance which subset of the assigned problems will be marked and should therefore attempt all assigned problems.

Weeks	Topics	Chapters
1-2.5	Some multivariate calculus	Moodle material
2.5-5	Convex sets and convex functions	2-3
6-9	Convex optimization and duality	4-5
10-12	Introduction to Nonsmooth Analysis	Material to be provided
13	REVIEW	

Academic Integrity and the Academic Code of Conduct

This course is governed by Concordia University's policies on Academic Integrity and the Academic Code of Conduct as set forth in the Undergraduate Calendar and the Graduate Calendar. Students are expected to familiarize themselves with these policies and conduct themselves accordingly. "Concordia University has several resources available to students to better understand and uphold academic integrity. Concordia's website on academic integrity can be found at the following address, which also includes links to each Faculty and the School of Graduate Studies: concordia.ca/students/academic-integrity." [*Undergraduate Calendar, Sec 17.10.2*]

Behaviour

All individuals participating in courses are expected to be professional and constructive throughout the course, including in their communications.

Concordia students are subject to the [Code of Rights and Responsibilities](#) which applies both when students are physically and virtually engaged in any University activity, including classes, seminars, meetings, etc. Students engaged in University activities must respect this Code when engaging with any members of the Concordia community, including faculty, staff, and students, whether such interactions are verbal or in writing, face to face or online/virtual. Failing to comply with the Code may result in charges and sanctions, as outlined in the Code.

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Extraordinary circumstances

In the event of extraordinary circumstances and pursuant to the [Academic Regulations](#) the University may modify the delivery, content, structure, forum, location and/or evaluation scheme. In the event of such extraordinary circumstances, students will be informed of the change.